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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/532,878

04/28/2005

Takehiko Fujita

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441 7590 09/02/2008

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EXAMINER

KACKAR, RAM N

ART UNIT

PAPER NUMBER

1792

MAIL DATE

DELIVERY MODE

09/02/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/532,878	Applicant(s) FUJITA ET AL.	
	Examiner Ram N. Kackar	Art Unit 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/30/2008 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1-7 and 9-12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Suzuki et al (JP 2001144019).**

Suzuki et al disclose a thermal processing unit comprising a holder for plurality of substrates (Fig 1-23), reaction container (2), process gas supplying mechanism (41,42,43,44,45 and 46), heating mechanism (31-36) and a controller which controls each gas circuit and each heating mechanism independently from each other according to a recipe which controls gas flows and heating power. Suzuki further teaches that a recipe for a certain process rate is modified depending upon the number of substrates in the batch so that dummy wafers may not

be needed to fill empty slots. It is obvious that the determination of recipe modification depends upon previous experimentation.

Regarding the limitation “an arrangement table-data storing part that stores arrangement table-data associating the number-data of the substrates to be processed by one batch-process with arrangement-data of the substrates on the holder is provided, and the controlling unit is adapted to obtain arrangement- data, depending on the actual number of the substrates to be processed by one batch-process, based on the arrangement table-data stored in the arrangement table-data storing part, and to cause the holder to hold the substrates according to the obtained arrangement-data”, this appears to require that the substrates are loaded in the processing chamber according to predetermined arrangement.

It is obvious that modified processing parameters for a given number of substrates as above would provide desired processing result only when the processing conditions are similar to the ones which existed when the model was generated.

Claim Rejections - 35 USC § 103

4. Claims 1-7 and 9-12 are also rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al (JP 2001144019) in view of Suzuki et al (US 2002-0014483).

Suzuki et al (JP 2001144019) is discussed above.

Regarding the limitation “an arrangement table-data storing part that stores arrangement table-data associating the number-data of the substrates to be processed by one batch-process with arrangement-data of the substrates on the holder is provided, and the controlling unit is adapted to obtain arrangement- data, depending on the actual number of the substrates to be

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processed by one batch-process, based on the arrangement table-data stored in the arrangement table-data storing part, and to cause the holder to hold the substrates according to the obtained arrangement-data”, this appears to require that the substrates are loaded in the processing chamber according to predetermined arrangement.

Suzuki et al (US 2002-0014483) disclose that temperature set points for spatially arranged heaters depend upon the arrangement of substrates in order to get uniform process results (See for example Abstract, Fig 3, Paragraph 18-19, 61-65, 83, 86 and 100).

Therefore having substrate arrangement as process parameter for variable number of substrates would have been obvious for one of ordinary skill in the art.

Response to Arguments

Applicant's arguments filed 4/30/2008 have been fully considered but they are not persuasive.

Applicant's interpretation of the term “speed of the film forming process” is not understood. It is noted that this term means deposition rate as measured in nm/min (See for example Fig 4 and Page 11 lines 1-12 of the specification or Paragraph 37 of the US Pub 20060099805). Deposition rate is a process result and good processing requires it to be uniform across different batches as disclosed in Suzuki et al (JP 2001144019).

Conclusion

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ram N. Kackar whose telephone number is 571 272 1436. The examiner can normally be reached on M-F 8:00 A.M to 5:P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571 272 1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ram N Kackar/
Primary Examiner, Art Unit 1792